

Castle Lake Proves Ideal Vacation Spot In Shasta

By J. O. McKINNEY

Ten miles southwest from the town of Mount Shasta, Castle Lake is snuggled down in a mountain-rimmed cove just big enough to accommodate its 48-acre surface. It is at an elevation of 5,600 feet, is a scenic gem—and a pictorial guinea pig. For 21 years the California Department of Fish and Game has been conducting

experiments, and studies that cover about everything that can be connected with fish and fishing.

These were not for the benefit of Castle Lake alone. It is representative of more than 150 similar glacier-formed lakes in Northern California. What will fit this lake will not be far from what will succeed in all the others. It was chosen because it is more ac-

cessible than the others. It has but one road leading to and away from its shores which makes checking the fishing results a relatively simple routine.

Several points are covered in this check. Whether the fisherman is a man, woman, or child; whether fishing from shore or a boat; county of the angler's residence; and hours fished. Stomach con-

tent, length, and fin marks of the catches also came in for investigation. All these things had a bearing on what was to be learned, and were duly recorded.

Other phases of fish life were also investigated. Four varieties of trout, and two species of minnows inhabited the lake when the tests were begun in 1938. Joseph H. Wales, biologist for The Fish and Game Department in charge of the investigations, recorded that Mackinaw, eastern brook, brown and rainbow trout were there; with golden shiners, and black dace minnows the smaller fish. The two latter numbers were probably accidentally introduced by fishermen who used them for bait. The trout were planted; the Mackinaws in 1924.

Fishing soon brought out several facts. One was that while both Mackinaw and eastern brook trout showed graduated sizes that indicated local reproduction, the browns and rainbows clearly did not spawn in the lake. These fish demand streams in which to spawn, and no stream large enough for fish to ascend flows into the lake.

Both Mackinaw, and brook trout were found to be spawning over springs that bubble up from the bottom of the lake where a current is developed. This would indicate that these varieties were favored for lake planting.

But other factors also showed. One was that Mackinaw trout thrived mostly on smaller fish—even their own offspring, but most commonly on eastern brook fry. This is because the brook trout are trusting souls as youngsters, and do not shun danger at all. A weakness in this combination was clearly indicated.

Brown trout, too, were cannibalistic to a degree. Rainbows not too bad. This brought about a process of reasoning that developed the belief that all fish should be cleared from the lake, and a new start made.

On October 9, 1946 rotenone was used to kill all fish life in the lake. The water remained toxic until June, the following year. Then eastern brook trout were planted, fin-marked for ready identification. Two plantings of 20,000 each were put in the lake and Wales and assistants sat back to observe results. These were soon apparent. A batch of rainbows were accidentally introduced along with the brook trout, and consternation reigned—for awhile.

That was a fortunate slip. The rainbows thrived on the natural food without molesting the brook trout. They supplied fish for the anglers who flocked to the lake, and in every way showed they and the brookies could co-exist without incident. While the accidents do not reproduce in the lake, and must be planted every year, or two, the brook trout now spawn to keep a population without having to be replenished from the hatchery. And little cannibalism is ever noted.

Food for fish is never overabundant in Castle Lake. The lake bed was gouged out by glaciers in the long ago, and runs about 120 feet deep over most of the bottom. One spot measures 122 ft. Fresh water shrimp do not thrive there due to lack of vegetation, which again is caused by lack of fertility, and by a chill water. An application of soy bean meal was applied once to try to bring about more vegetative growth, but results did not appear to justify continuation. Plankton is plentiful, and there is an abundance of insect life during summer. Larvae of insects that develop on the lake bottom where the water is not too deep is about the only food aside from plankton, that the fish get during the long winters.

Mackinaw trout, being so cannibalistic, are not favored for planting in a lake with other trout. But Wales, who has remained in charge of all investigations at the lake, believes that a lake with all Mackinaws, with minnows for food would supply lunkers for those who like their fish big. There is but one drawback to this plan as the biologist sees it. Such a lake must have an access road so that boats can be brought in for use



JOSEPH WALES

Bulletin Ichthyologist Takes Post In Oregon

MOUNT SHASTA — Joseph H. Wales, California Fish & Game Commission biologist, has resigned his state post to accept a place on the faculty of Oregon State College at Corvallis. The transfer will be made May 1.

The ichthyologist will have charge of study, and investigation of trout ecology in Oregon waters. The northern state supplies laboratory facilities on the stream banks of many of their rivers.

Wales has been with the California commission for 27 years, and has resided in Mount Shasta during that time. His work included stream, and habitat improvement. Fish screens were installed, and maintained under his supervision. For more than 20 years he carried out intensive investigations on trout life in Castle Lake where information gained is now being applied throughout many other sections.

The fisheries expert is responsible for many practices in fish culture throughout all lands where these things are conducted in a scientific manner.

RARE PRINTS

SYRACUSE, N.Y. (UPI) — The Dow Chemical Co. has given a set of four color lithographs, depicting the history of paper-making to the State University College of Forestry at Syracuse University. Only 150 sets of the prints are said to be in existence.

In fishing, Mackinaws are almost never taken save by trolling from boats.

The ichthyologist believes that fishing should be heavier at Castle Lake than it is now to keep a balance between the fish census, and a normal food supply. Poor roads, and a worse camp site during recent years is responsible for considerable falling off of fishermen. Lack of funds by the forest service is blamed for the run-down condition of both the road over the last few miles, and the camp grounds.

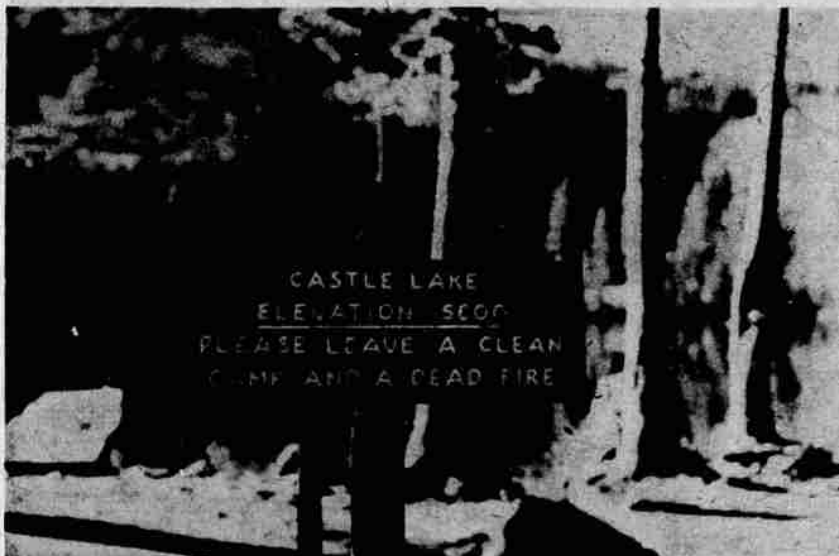
A few years ago fishermen would come to this lake and camp for several days of fishing. Now if one is lucky to get into the camp grounds. He cannot relax until he gets out of there. It is that bad.

But the wild beauty of the spot remains, along with good fishing. Indians feared and shunned the lake even before the coming of the white man. They believed that its deep waters that go down to 122 feet, hid the abode of evil spirits. Fierce storms that at times beat the waters to a froth, aided in that belief.

But the road is not too bad for a careful driver. If one likes it wild, but beautiful, Castle Lake will abundantly fill the bill.



CASTLE LAKE is one of the most scenic small lakes to be found anywhere in the area. This photo shows the quiet waters, good fishing areas and the majestic sweep of Mt. Shasta above the calm waters.
—Photo by Joseph Wales



HIGH UP IN THE MOUNTAINS for the average person, Castle Lake lies at an elevation of 5600 feet. This picture was taken in the early morning and imparts a ghostly look to the background as the mist rises off the water.
—Photo by McKinney



DEEP WATER is to be found over more than half of the 48 acres of Castle Lake. The water just off the cliffs in the background of this photo is 122 feet deep. Depths of 100 feet are found over half the remaining surface.
—Photo by Joseph Wales